DOCUMENT RESUME

ED 104 077 EC 071 936

AUTHOR Browning, Philip
TITLE Rehabilitation Research with the Mentally Retarded: A Consideration for Theory. Working Paper No. 40.
INSTITUTION Oregon Univ., Eugene. Rehabilitation Research and Training Center in Mental Retardation.
PUB DATE May 70
NOTE 22p.; Paper presented at the Annual Meeting of the American Association on Mental Deficiency (94th, Washington, D.C., May 1970)

EDRS PRICE MF-$0.76 HC-$1.58 PLUS POSTAGE
DESCRIPTORS Adults; Exceptional Child Research; *Mentally Handicapped; *Predictive Measurement; *Rehabilitation; *Research Needs; *Theories

ABSTRACT

Discussed are theoretical considerations related to prognostic rehabilitation research with the adult mentally retarded. Noted is the lack of a unifying theory of rehabilitation, and reviewed are two approaches to theory building (deductive and inductive). Deductive functions are defined as formulating and testing hypotheses from already existing research, while inducrive is seen to propose and test hypotheses based on a more neuristic or exploratory approach. (CL)

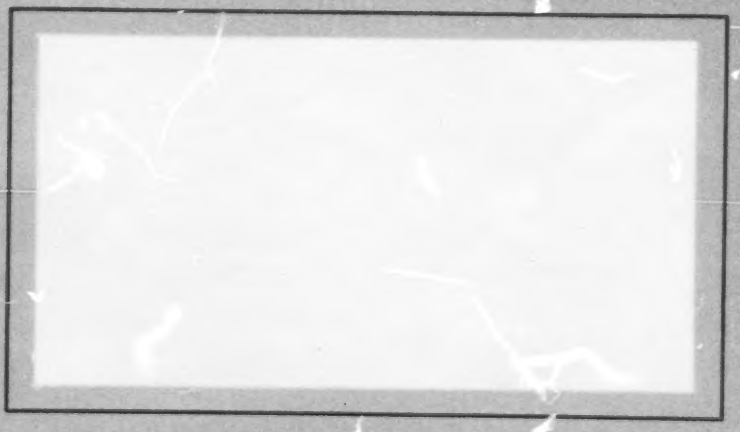
ED104077

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

College of Education
Center on Human Development

Rehabilitation Research and Training Center in Mental Retardation

University of Oregon, Eugene



Mic 2

ED104077

Presented at the 94th

Annual Convention

American Association on

Mental Deficiency

Washington, D. C.

27 May 1970

WORKING PAPER NO. 40

REHABILITATION RESEARCH WITH THE MENTALLY RETARDED: A CONSIDERATION FOR THEORY

Philip Browning
May, 1970

These papers are intended primarily as informal communications to and among members of the Research and Training Center staff. The materials contained herein are generally not in final stages of refinement and are not intended for public release.

REHABILITATION RESEARCH WITH THE MENTALLY RETARDED: A CONSIDERATION FOR THEORY [1]

Philip Browning

University of Oregon

One of the popular areas of research with the adult mentally retarded has been the prediction of personal, social and vocational adjustment. More specifically, interest has focused on the identification and quantification of the relationship between input and process variables and habilitation-rehabilitation outcome variables. However, the voluminous accumulation of research results from the literally hundreds of studies which have addressed themselves to this area are considered to be essentially unusable (Cobb, 1969).

This distressing note can be attributed, in part, to the fact that most of the investigations lack sophistication regarding important research considerations, e.g., population parameters, sample selection, research design, identification and quantification of predictor and criterion variables, etc. (Windle, 1962; Kolstoe & Shafter, 1961; Cobb & Epir, 1966; Wolfensburger, 1967; Cobb, 1969; Butler & Browning, in preparation). The problems of research methodology have been brought to our attention; however, it is surprising to note the paucity of recognition given to the importance of the role of theory in predictive investigations with the adult retarded, especially since practically all the studies have been theory free.

The purpose of this paper is to discuss theoretical considerations as they relate to prognostic rehabilitation research with the mentally

retarded. It is based on the premise that until serious attention is given to such things as an attempt to develop a coherent body of knowledge, systematize independent and dependent variables, and fit predictive investigations to coherent developmental theory, there will be little real progress in the development of useful predictive methods for the rehabilitation of the retarded (Cobb, 1969).

THEORY

Philosophers and scientists have provided us with many and varied ways to view theory; nevertheless, for the intent of this paper the following definition will suffice:

> A theory is a set of interrelated constructs (concepts), definitions, and propositions that presents a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena [Kerlinger, 1964, p. 11].

According to this definition, a theory is a system or model characterized by a collection of assumptions, statements, or propositions consisting of defined parameters, constructs, or variables which are systematically interrelated to operate within a coherent framework.

Hall and Lindzey (1957), in discussing what theories do, state that they can serve to: (1) lead to the collection of relevant empirical relations not yet observed, (2) permit the incorporation of known empirical findings within a logically consistent and reasonably simple framework, and (3) prevent the observer from being dazzled by the full-blown complexity of natural or concrete events [pp. 13-14]. These three functions are germane to the rehabilitation prognosis of the retarded.

First, we are a long way from having investigated all the factors or events related to their adjustment. In fact, one possible explanation for the lack of stable empirical relationships between predictive and criteria variables is that we have yet to observe what the relevant variables are. A theory then may lead us to discover the critical independent and dependent variables which have been previously overlooked. Secondly, there is already an abundent amount of empirical data collected from predictive studies with the retarded. What is needed is a framework for the incorporation of the more sound empirical findings--if there are any. The channeling of such data into a system may lead to theory-building. Finally, the rehabilitation of the retarded is certainly a highly complex phenomena. Consequently, there is a need for a theory which will serve to specify a limited number of interrelated events and thus enable the reduction of this complex phenomena to more manageable proportions.

A theory also serves a deductive and inductive function, both of which are approaches to theory formulation and development [see Figure 1 (Carkhuff et al., 1967)]. The first approach concerns already existing

- - - - - - - - - - - - - -

Insert Figure 1 About Here

- - - - - - - - - - - - - -

theory from which systematic hypothetical deductions are made and tested by experiment. The inductive approach differs in that the hypotheses or propositions which are generated and tested are derived from relatively stable empirical data which was originally collected in a heuristic and exploratory fashion.

If we are ever going to make "sense" out of the phenomena, the rehabilitation of the mentally retarded, it seems necessary for researchers to begin to make a comprehensive attempt in theory-building by drawing both inductively from bodies of stable data, if there are any, and deductively from already existing formulations. The remainder of the paper is devoted to a brief discussion of these two approaches as they relate to prognostic rehabilitation research with the retarded.

PROGNOSIS

Practically all of the studies on the prediction of personal, social and vocational adjustment with the mentally retarded can be characterized as atheoretical in nature. As well, only sparse attention has been given to either of the mentioned approaches for systematic theory-building.

Deductive

One reason that such limited attention has been given to theory development via the deductive approach is that there is no logically consistent unifying theory of rehabilitation (McDaniel, 1965; Matlin & Albizu-Miranda, 1969; Malikin & Rusalem, 1969) from which to systematically derive predictors and outcome criteria. McDaniel (1965) states that this is one of the major obstacles to rehabilitation research in general and that until there is a basic theory which can serve as a pattern or paradigm and a productive source of hypotheses to be tested, we will be unable to approach certain rehabilitation goals.

However, the lack of any well formulated theory of rehabilitation does not excuse investigators from having given so little consideration to theory development via this approach. For example, a major concentration of predictive studies with the retarded has been with vocational success, yet to this writer's awareness, no reference has been made from this body of literature to the field of vocational psychology in which considerable vocational longitudinal research and theory-building have been underway for the past several decades (e.g., Borow, 1964; Holland, 1964; Roth et al., 1970).

It seems imperative that we begin to give more consideration to already existing theory when engaging in rehabilitation research with the retarded. It would certainly assist the researcher in making one of his most important decisions, which is the determination of the factors to be investigated. Cobb (1969) discusses the importance of theory as it relates to this problem of variable selection:

> ...predictors are in the nature of independent variables and therefore may logically be any measures whatsoever which can show a statistical relationship to a criterion variable. The investigator can choose to explore anything that suits his fancy, and many a test has no better rationale than it "works" in the sense that a relationship with a criterion or dependent variable can be shown at some acceptable level of probability. However, it is hardly economical research to explore any and every possible variable at random, without some theoretical basis for a reasonable hypothesis. What we are really searching for in the end is a systematic account of the determiners of the behavioral outcomes that we are interested in. Consequently, out of

> the wide universe of all possible measures we [should] select those which are consistent with already known [empirical] relationships or those which are selected by or derivative from a theoretical orientation to the problem at hand [p. 11].

One of the few groups of investigators to look at the vocational aspects of the mentally retarded within the context of theory is associated with the Work Adjustment Project at the University of Minnesota. The major feature that has evolved from this longitudinal research project, which began in 1957, has been the development of a theory of work adjustment, particularly as it relates to the field of vocational rehabilitation [see Figure 2 (Dawis et al., 1964; Dawis et al., 1968; Lofquist & Dawis, 1969)]. It is possible to state a number of formal

---

Insert Figure 2 About Here

---

propositions from this theory about work adjustment as a basis for research. For example, Proposition II is:

> Satisfactoriness is a function of the correspondence between an individual's abilities and the ability requirements of the work environment, provided that the individual's needs correspond with the reinforcer system of the work environment [Lofquist & Dawis, 1969, p. 50].

Recent effort has been expended toward operationalizing the major theoretical constructs. As well, research attention is being given to the usefulness of these measures with the mentally retarded (Dawis et al., 1967).

The work adjustment theory has a number of implications for the practitioner and researcher who is in the general field of vocational rehabilitation and interested in the vocational aspects of the retarded in particular (Dawis et al., 1959; Betz et al., 1966; Dauppi & Weiss, 1967; Dawis, 1967; Browning, 1969; Lofquist & Dawis, 1969). However, probably its greatest utility at this time is that it provides the user with a systematic "conceptual" framework for viewing the vocational aspects of the mentally retarded.

As a summary to the deductive approach to theory-building, let us address ourselves to the words of Barnhardt (1963):

> Theories pursued as ends are verbalisms, but theories used as techniques for the discovering and measurement of the variables relevant and effective in the pursuit of worthy substantive goals are indispensable to common practice [p. 44].

Inductive

In looking at the other end of the continuum there are those who take the position that scientific discovery should proceed on the basis of a precise description of what is rather than theoretical speculation about what might be (e.g., Skinner, 1953). Those who adhere to this line of thinking begin their scientific exploration by direct observation and collection of raw data which is subjected to systematic analyses for the testing of useful uniformities or lawful relations among the events. It is through this process of discovering a fundamental body of empirical knowledge that the theoretician will be given something about which to theorize.

As for rehabilitation research with the mentally retarded, Crosson's (1969) study is one of the few investigations based on this inductive approach. In essence, he studied the use of shaping, operant discrimination, and chaining as techniques for training retarded youth to perform work. These are principles based on operant behavior which has been formulated via the inductive approach.

There is an overwhelmingly large bank of data which has been collected from prognostic studies in rehabilitation. In fact, literally hundreds of predictive and criteria variables have been investigated; consequently, the problem is not necessarily the lack of data but rather, "...lies in the need for a systematic organization of data... [Cobb, 1969, p. 12]."

Meyers (1965) in discussing prognostic research in rehabilitation states:

> ...a lack of systematic theory has been glaring, for factors to be investigated have been selected on an empirical and pragmatic basis. Consequently, there exist a hodge-podge of empirical relationships between prognosis and other factors but little systematic or theoretical knowledge...[p. 41].

DiRenzo (1966) indicates that empirical information cannot speak for itself and thus needs interpretation within the context of a theoretical orientation. The empiricist who takes the inductive approach in searching for knowledge does not necessarily exclude the eventual importance of theory. Rather, he merely says that theoretical construction is premature without an existing body of facts which represent laws and principles. Only when a sufficient number of observations and facts

exist in relation to a phenomena does theory come into play. It is at this point, however, that theorizing takes on a role since science seeks to reduce the description and explanation of the phenomenon to the fewest possible principles and laws.

Whether the raw data, which has been collected from predictive studies with the mentally retarded, is ready for such interpretation is open to question since readiness for theory-building via the inductive approach begins when the data represents some stability regarding empirical relationships between events. What seems to be needed at this point is a systematic analysis of this mass of empirical information in order to determine its level of readiness or the degree of stability between independent (predictor) and dependent (criteria) variables.

SUMMARY

The writer attempted to convey the fact that only minimal consideration has been given to the role of theory in prognostic research with the adult retarded. This is especially surprising since the ultimate purpose of theory is "explanation," which implies the phenomenon at hand.

Secondly, two approaches to theory building were discussed and research examples provided for each. An attempt was made to stress the need for both the inductive and deductive approach in rehabilitation research with the retarded.

Since the goal of both scientific exploratory avenues is to explain phenomena, it is hoped that favoratism was not given to one or the other. As Underwood (1957) states:

> Important discoveries have been made and will continue to be made by asking simple questions about the functioning of nature. Likewise, important contributions have been made and will continue to be made by theoreticians as they organize apparently diverse facts. The history of science gives no basis for the disparagement of either the systematic empiricist or the theoretician at any stage in the development of a science [p. 191].

FOOTNOTES

[1]Preparation of this paper was supported in part by Rehabilitation Research and Training Center Grant RT-16 (C-4) from the Social and Rehabilitation Service, Department of Health, Education, and Welfare, Washington, D. C., 20201.

REFERENCES

Barnhart, G. R. Advances in rehabilitation research. Journal of Rehabilitation, 1963, 24 (2), 42-44.

Betz, E., Weiss, D. J., Dawis, R. V., England, G. W., & Lofquist, L. H. Seven years of research on work adjustment. Minnesota studies in vocational rehabilitation: XX, 1966.

Borow, H. An integral view of occupational theory and research. In H. Borow (Ed.), Man in a world at work. Boston: Houghton Mifflin Company, 1964.

Browning, P. Vocational evaluation for the mentally retarded. In R. F. Heber, P. J. Flanigan, & W. S. Rybak (Eds.), Changing concepts in mental retardation: Pre-vocational evaluation of the mentally retarded. Madison, Wisconsin: Rehabilitation Research and Training Center in Mental Retardation, Monograph II, 1969.

Butler, A. J., & Browning, P. Methodological issues in the prediction of rehabilitation outcome of the mentally retarded. In H. J. Prehm (Ed.), Strategies for rehabilitation research with the retarded. Eugene, Oregon: Rehabilitation Research and Training Center in Mental Retardation, Monograph in progress.

Carkhuff, R. R., Alexik, M., & Anderson, S. Do we have a theory of vocational choice? Personnel and Guidance Journal, 1967, 46, 335-345.

Cobb, H. V. The predictive assessment of the adult retarded for social and vocational adjustment: Analysis of the literature. Vermillion, South Dakota: Department of Psychology, University of South Dakota,

Final Report, Research Project RD-1024-P of the Social and Rehabilitation Service, Department of Health, Education and Welfare, Washington, D. C., 1969.

Cobb, H. V., & Epir, S. Predictive studies of vocational adjustment. In S. G. DiMichael (Ed.), New vocational pathways for the mentally retarded. Washington, D. C.: American Rehabilitation Counseling Association Division of the American Personnel and Guidance Association, 1966.

Crosson, J. E. A technique for programming sheltered workshop environments for training severely retarded workers. American Journal of Mental Deficiency, 1969, 73, 814-818.

Dawis, R. V., England, G. W., & Lofquist, L. H. The application of research results. Minnesota studies in vocational rehabilitation: IX, 1959.

Dawis, R. V., England, G. W., & Lofquist, L. H. A theory of work adjustment. Minnesota studies in vocational rehabilitation: XV, 1964.

Dawis, R. V. The Minnesota studies in vocational rehabilitation. Rehabilitation Counseling Bulletin, 1967, 11, 1-10.

Dawis, R. V., Logquist, L. H., & Weiss, D. J. Assessing the work personalities of mentally retarded adults. Research Project RD-2568-P of the Social and Rehabilitation Service, Department of Health, Education and Welfare, Washington, D. C.: July, 1967.

Dawis, R. V., Lofquist, L. H., & Weiss, D. J. A theory of work adjustment: A revision. Minnesota studies in vocational rehabilitation: XXIII, 1968.

DiRenzo, G. J. (Ed.), Concepts, theory, and explanation in the behavioral sciences. New York: Random House, 1966.

Hall, C. S., & Lindzey, G. Theories of personality. New York: John Wiley & Sons, Inc., 1957.

Holland, J. L. Major programs of research on vocational behavior. In H. Borow (Ed.), Man in a world at work. Boston: Houghton Mifflin Company, .964.

Kauppi, D. R., & Weiss, D. J. The utility of the classification "mentally retarded" in vocational psychology. Proceedings from the 75th Convention, American Psychological Association, 1967, 347-348.

Kerlinger, F. N. Foundations of behavioral research. New York: Holt, Rinehart and Winston, Inc., 1964.

Kolstoe, O. P., & Snafter, A. J. Employability prediction for mentally retarded adults: A methodological note. American Journal of Mental Deficiency, 1961, 66, 287-289.

Lofquist, L. H., & Dawis, R. V. Adjustment to work: A psychological view of man's problems in a work-oriented society. New York: Appleton-Century-Crofts, Educational Division, Meredith Corporation, 1969.

McDaniel, J. W. Rehabilitation research in state agencies. Rehabilitation Literature, 1965, 25 (3), 66-70.

Malikin, D., & Rusalem, H. (Eds.), Vocational rehabilitation of the disabled. New York: New York University Press, 1969.

Matlin, N., & Albizu-Miranda, C. The role of theory in vocational rehabilitation. Journal of Rehabilitation, 1969, 35 (6), 22-39.

Meyers, J. K. Consequences and prognoses of disability. In M. B. Sussman (Ed.), Sociology and rehabilitation. Washington, D. C.: American Sociological Association, 1965.

Roth, R. M., Hershenson, D. B., & Hilliard, T. (Eds.), The psychology of vocational development. Boston: Allyn and Bacon, Inc., 1970.

Skinner, B. F. Science and human behavior. New York: The Free Press, 1953.

Underwood, B. J. Psychological research. New York: Appleton-Century-Crofts, Inc., 1957.

Windle, C. Prognosis of mental subnormals. American Journal of Mental Deficiency, Monograph Supplement, 1962, 66 (5).

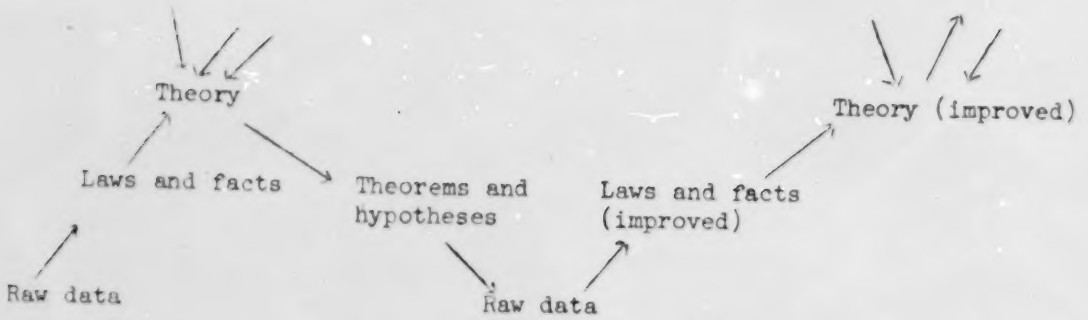
Wolfensburger, W. Vocational preparation and occupation. In A. A. Baumeister (Ed.), Mental retardation: Appraisal, education, rehabilitation. Chicago: Aldine Publishing Company, 1967.

FIGURE CAPTIONS

Figure 1 A Schematic Representation of the Inductive and Deductive Functions of Theory

Figure 2 Theory of Work Adjustment

Figure 1. A Schematic Representation of the Inductive and Deductive Functions of Theory*



*Based on Carkhuff et al. (1967).

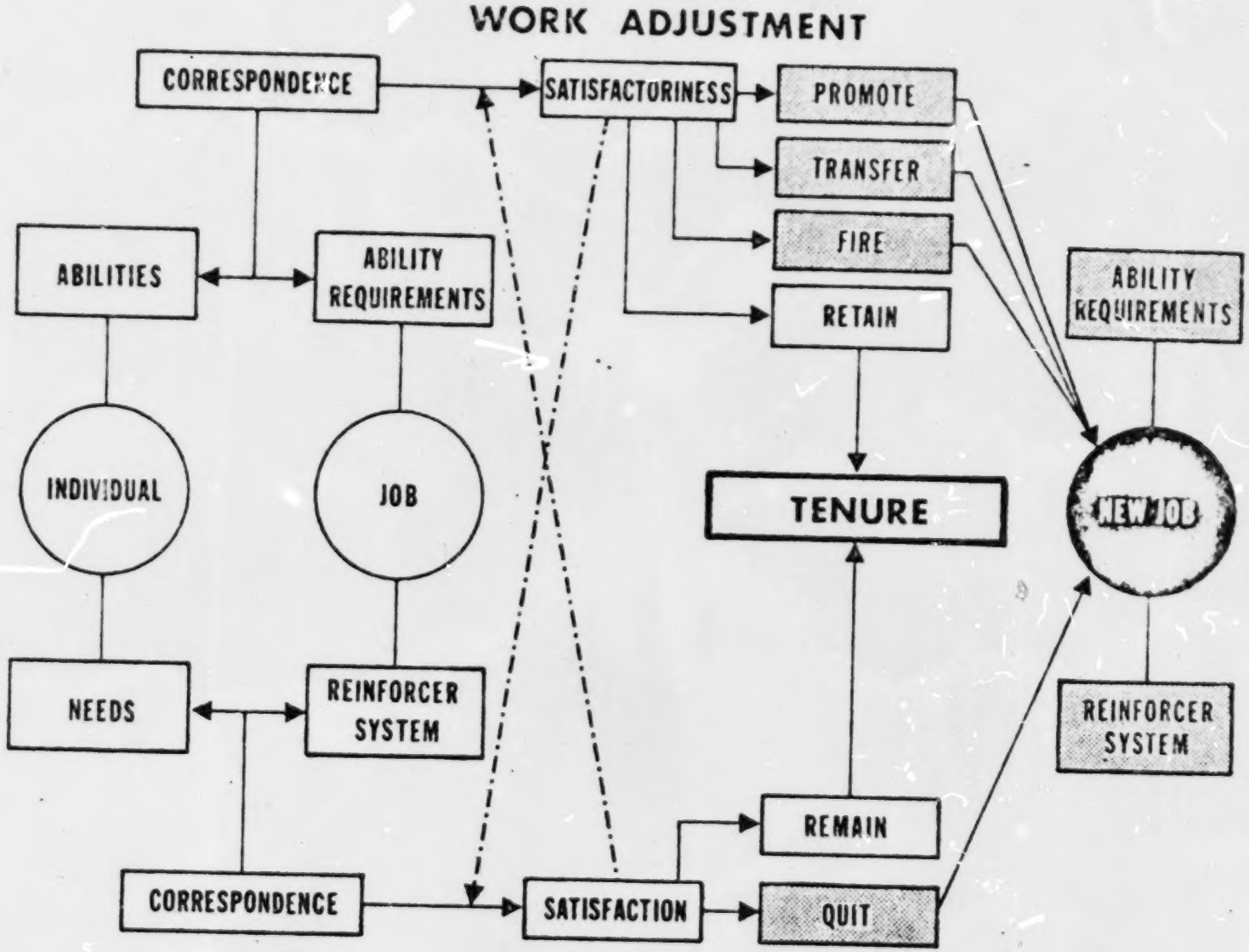


Figure 2. Theory of Work Adjustment*

*Copied from Lofquist and Dawis (1969)

BEST COPY AVAILABLE